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## Planning and Corrupting Water Resources Development: The Case of Small Reservoirs in Ghana

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**ABSTRACT:** Agricultural (water) development is once again at the fore of the development agenda of sub-Saharan Africa. Yet, corruption is seen as a major obstacle to the sustainability of future investments in the sector but there is still little empirical evidence on the ways corruption pervades development projects. This paper documents the planning and implementation processes of two specific small reservoir programmes in the north of Ghana. We specifically delve into the dynamics of corruption and interrogate the ways they add to the inherent unpredictability of development planning. We argue that operational limitations of small reservoirs such as poor infrastructure, lack of managerial and organisational capacity at the community level and weak market integration and public support are the symptoms – rather than inherent problems – of wider lapses in the planning processes that govern the development of small reservoirs in Ghana and plausibly worldwide. A suite of petty misconduct and corrupt practices during the planning, tendering, supervision, and administration of contracts for the rehabilitation and construction of small reservoirs results in delays in implementation, poor construction, escalating costs, and ultimately failures of small reservoirs vis-à-vis their intended goals and a widely shared frustration among donor agencies, civil servants, contractors, and communities. Such practices hang on and can only be addressed through a better understanding of the complex web of formal decisions and informal rules that shape the understanding and actions of the state.

**KEYWORDS:** Governance, planning, accountability, corruption, state, bureaucracy, sub-Saharan Africa, Ghana

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### INTRODUCTION

*Whether in the form of bribes, kickbacks, fraud, patronage or undue political influence, corruption in irrigation is a significant problem that disproportionately harms those without enough money or power to compete in this underground economy.*

(Rijsberman, 2008)

The 2008 Global Corruption Report published by Transparency International marks a renewed interest in understanding and curbing the dynamics of corruption in the water sector (Zinnbauer and Dobson, 2008; see also Stålgren, 2006). This renewed interest stems from the recognition that lack of transparency and accountability can have far-reaching consequences for the effectiveness and equity of public service delivery and more broadly, for development initiatives. Calls to 'fight corruption' have

become central to the promotion of good governance within (WWAP, 2006) and beyond the water sector (OECD, 2005; World Bank, 2007a) but there is still little empirical evidence on the ways corruption pervades development projects.

Yet, studies on rent-seeking and corruption in the irrigation sector have a long history. They mostly focused on major irrigating countries with large and powerful irrigation bureaucracies engaged in a hydraulic mission (Molle et al., 2009) where "rent-seeking behaviour is deeply embedded in the social and political fabric" (Briscoe, 1999) and reinforced by donor agencies' attitude that value the number of programmes and volume of funding over the outcomes of projects (Martinez and Shordt, 2008) and can even see corruption as having a functional role in the delivery of projects (Hobbs, 2005). Past research includes studies on India (Wade, 1982, 1985; Huppert, 2005), Pakistan (Rinaudo, 2002) and central Asia (Wegerich, 2006). But as a whole, corruption in the water and irrigation sector and notably the acts of omission and commission that characterise the relationships between international donors, national bureaucracies and private construction businesses and consultants remain under-researched (Stålgren, 2006; Rijsberman, 2008; Molle et al., 2009). There are, for instance, very few in-depth qualitative studies of the planning and implementation of irrigation projects in sub-Saharan Africa that explicitly investigate the complex social mechanisms of corruption and their impacts on the ground, though insights can be drawn from other sectors (health, education, justice; Blundo and Olivier de Sardan, 2003; see below).

Investigating dynamics of corruption within irrigation planning processes appears particularly timely. Indeed, agricultural development, including investments in agricultural water, especially in sub-Saharan Africa, is the subject of renewed interest from the international community and national governments alike (NEPAD, 2003; World Bank, 2007a, 2007b, 2007c; Lankford, 2009). At the same time, a two-fold, yet seemingly disconnected, diagnosis threatens the sustainability of such a move. First, corruption is identified as a major obstacle to productive investments and the broader agriculture-for-development agenda (World Bank, 2007a). Second, many studies highlight lapses in the planning and implementation of water development and management projects (for instance, Morardet et al., 2005) but they fall short of investigating the ways, and extent to which, corrupt practices might underpin them.<sup>1</sup> These studies go on by recommending alterations to planning and implementation processes that are supposed to fix the problem. Following Rondinelli (1982), we argue that this stand overlooks the inherent unpredictability of development. Our argument here is not that corruption fully explains project failure or disappointing results. Rather, we seek to understand how corruption contributes to this unpredictability.

Our analysis involves a detailed examination of the planning and implementation processes of two specific small reservoir programmes in the north of Ghana. We specifically investigate the workings (e.g. daily practices) of the irrigation bureaucracy (smaller in scale and influence than in Asia) and specific international development partners in the irrigation sector. These actors rely on each other; they operate within overlapping political economic contexts and their practices often share similar flaws when it comes to addressing corruption, transparency and accountability issues. We will show how the latter hinges on a tension between formalisation and a vernacular logic of practice (Ferguson, 2006) that characterises public action in sub-Saharan Africa, where a wide range of actors – state officials and non-state agents – are involved in shaping the actions of the state, in terms of both cooperation and competition with the state apparatus (Hagmann and Péclard, 2010).

As noted by Wade (1982) and given the sensitivities at stake, it is necessary to be clear about the empirical basis of our study and statements. The material on which this paper is based was collected in the course of several periods of fieldwork during 2009-2011. We mostly rely on ethnographic insights such as key informant interviews with government officials, contractors and international donors rather

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<sup>1</sup> A notable exception, but not specific to the water sector, is the insightful description of how corruption pervades World Bank projects proposed by Hobbs (2005).

than formal consultations and structured questionnaires.<sup>2</sup> By coding the interviews, we preserve the anonymity of our informants. These insights are supported by primary (in-depth analysis of the management of 24 small reservoirs in the north of Ghana) and secondary data (on investment costs). The original intention of the research was to better understand how small reservoirs were managed by local communities rather than to study the issues discussed in this paper. But, gradually, through multiple discussions with actors of the sector it became apparent that the planning, monitoring and implementation processes of small reservoir projects were riddled with (generally) unintended flaws. These flaws had a significant bearing on how small reservoirs were managed by local communities. This triggered cautious enquiries as part of wider conversations about the activities and difficulties multiple actors felt they were facing when planning and implementing small reservoir projects.<sup>3</sup> If there is a danger in accepting the views of any one individual at face value, the regularity and consistency of the answers obtained give us confidence in the accuracy of the broad picture. Many insights we gathered deal with what is generally considered to be 'petty corruption' as opposed to 'grand corruption' and 'state capture' (see below). We document a series of small lapses in management and failures in transparency and accountability that have significant cumulative consequences. Far from drawing normative judgements, we aim at a better understanding of how multiple actors behave 'in the real world' and why.

The paper starts with a review of the literature on corruption in the field of irrigation development and management. We highlight the importance of framing corruption within the broader developmental context in which West African states operate. We then give a brief overview of small reservoirs in Ghana and a detailed account of two programmes that have heavily invested in small reservoirs over the last 15 years. We specifically analyse problems of lack of transparency and accountability at multiple stages of the programmes' cycles and their impacts on the ground. The discussion synthesises insights from the case studies and highlights some key considerations to keep in mind when designing development interventions and, notably, small reservoir projects. The last section concludes that a better understanding of the contingent nature of corruption is needed to improve the planning and governance of water projects for the benefit of local communities.

## **THE GOVERNANCE OF WATER PROJECTS: INFORMALISATION OF THE FORMAL**

### **Corruption and agricultural water: A review**

Corruption has been defined as "the abandonment of expected standards of behaviour by those in authority for the sake of unsanctioned personal advantage" (Pinto-Duchinsky, 1996) or, in other words, as "the abuse of entrusted power for personal gain" (Plummer, 2008). Multiple forms of corruption are generally singled out and can occur simultaneously: 'petty (or bureaucratic) corruption' when multiple actors extract small benefits from their institutions and the implementation of regulations; 'grand corruption' when the number of 'beneficiaries' is more limited and plunder levels higher; and 'state capture' when the rules, regulations, laws and policies are shaped through illicit and non-transparent processes by and for the benefit of a few individuals (Plummer, 2008).<sup>4</sup> These framings of corruption put individual action and personal gain at the forefront. But other authors have highlighted the systemic nature of corruption (for instance, Gupta, 1995). This is clearly illustrated in the water sector (Stålgren, 2006) where collusion between private construction companies, politicians, national

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<sup>2</sup> Formal consultation and structured questionnaires were used to address issues pertaining to the constraints and opportunities of the use and management of small reservoirs. The absence of archival work is one of the limits of the present analysis.

<sup>3</sup> All informants were made aware of the purpose of the research (including the enquiry into the factors that underpin corrupt practices) and its potential future uses (publication of research articles). All of them answered our questions willingly.

<sup>4</sup> Bureaucratic corruption can also be termed administrative rent seeking (and does not always have to be petty), while state capture can also be classified as a form of political corruption.

bureaucrats and international development partners is said to be found in virtually all countries (Repetto, 1986; Molle, 2008).

Corruption in the irrigation sector takes multiple forms during the planning, design, procurement, construction, and operation stages of water projects, with negative impacts on performance and equity. Subsidy capture (selection of non-economic projects on the basis of biased cost-benefit analyses, preference given to large projects over rehabilitation and small-scale investments, selection of projects that exceed available funds and capacity), patronage, corruption in construction (negotiated low quality, prolonged construction, inflated costs, lack of transparency in the award of contracts), corruption in maintenance (negotiated low quality), and corruption in operation and fee collection (under-reporting of activities, payment for preferential supply) are among the most widely cited forms of corrupt practices (Repetto, 1986; Rijsberman, 2008; Stålgren, 2006). Corruption is then often attributed to the lack of downward accountability of irrigation bureaucracies that seek technical fixes and remain unable to monitor and standardise multiple farmers' practices, a lack of transparency and information, and the disconnect between budgets and performance/outputs in both governments and donor agencies (Rijsberman, 2008).

Despite this multitude of causes, forms, and effects, most of the existing literature on irrigation and corruption has focused on corrupt practices in the operation of water systems. Some authors frame corruption along economic lines. Repetto (1986) argued, for example, that corrupt practices in public irrigation systems (of major irrigating countries) stem from the gap that exists between the 'real value' of water and its price. This gap would constitute a rent that actors attempt to control administratively or politically (what he calls rent-seeking), leading to poor performance. Potential recipients of this rent do not outbid rivals through superior economic efficiency or foresight but by trying to control the people who allocate the rent. Inefficiencies persist as they are in the interest of influential stakeholders (see also Huppert, 2005). In the same vein, Rinaudo (2002) points out that "a group of farmers is likely to engage in a corrupt transaction if the expected benefits exceed the potential transaction costs".

Other scholars have focused on corruption within irrigation bureaucracies. They highlight the capacity of the bureaucracies to adjust and reinvent themselves. They also point out their specific professional ethos, "pervaded by a sense of hierarchy, a faith in planning, and the belief that the considerable technical expertise needed to address water issues insulates engineers from public and laypersons' scrutiny" (Molle et al., 2009). These scholars argue this leads to a lack of downward accountability and transparency that paves the way to rent-seeking. In what might well be the most widely quoted work on corruption and irrigation, Robert Wade (1982, 1985) showed how a system of administrative and political corruption reproduces, with the active participation of the farmers, a "market for public office" that is based on the rent-seeking potential of any one position within the Indian irrigation bureaucracy. More recently and of specific interest for our study, Laube (2009), in an investigation of the irrigation bureaucracy of the Tono irrigation project in the Upper East Region (UER) of Ghana, highlights the cobbled interests of multiple actors (politicians, civil servants, farmers, traditional authorities) and describes a "creative bureaucracy" where formal rules and regulations are meshed with informal norms and opportunistic behaviours. He indicates that "administration is less bureaucratic control via a fixed set of regulations, but the creative working of political arenas that are earmarked by competitive sources of power" and highlights that irrigation bureaucrats – who are still dependent on government funding and political support for their personal careers – are likely to cave in to political pressures. Lees (1986) provides another example of informal and opportunistic adjustments of irrigation bureaucracies in the Gezira scheme in Sudan and the Mwea irrigation system in Kenya.

But corruption is neither inherent nor limited to irrigation bureaucracies. Here, the framework advanced by Huppert (2005) to understand rent-seeking in the management and allocation of water in public irrigation schemes is of particular interest. He describes the relationship between 'the service provider' (the bureaucracy) and 'the client' (the farmer) as an incomplete or deficient contract relationship which can lead to opportunistic behaviours (corruption) on the side of the bureaucracy and, one could add, the farmers as well. This deficient contract relationship hampers effective

management and affects system performance. The concept of 'contract relationship' is useful to characterise multiple relationships in the arenas of water planning (communities-private contractors-line agencies) and development cooperation (national government-international donors). The concept brings to the fore two key elements that allow for a better understanding of corruption. First, irrigation projects, including small reservoirs, involve multiple relationships among multiple actors. Second, it is the configuration of stakeholders' interests and the incentive structure that determine the extent and nature of corrupt practices and the final outcomes of these irrigation projects.

### **State and donors at work: About contingent practices**

*Corruption is a violation of norms and standards of conduct (...) There are always divergent and conflicting assessments of whether a particular course of action is 'corrupt'. Gupta (1995)*

This quote reminds us of the contingent nature of corruption, and hence the need to understand it in the broader context in which West African states operate. We turn here to a rich literature grounded in the field of anthropology that focuses on understanding "what do states do when they are working" (Bierschenk, 2010; see also Gupta, 1995), notably from the perspective of corruption (Olivier de Sardan, 1999; Blundo and Olivier de Sardan, 2003). This is motivated by the fact that the two case studies we investigated largely revolve around state actors (bureaucrats); it is important to situate their practices. This is not an attempt to shy away from the topic of corruption or legitimise it on the ground of cultural contingencies or other 'essential' characteristics of African states that would explain their failure to deliver public services, but, rather an effort to better understand the underpinnings of cumulated 'micro-differences'<sup>5</sup> that shape the trajectory and outcomes of development projects and public interventions (see Bierschenk, 2010). We aim to understand the suite of 'everyday practices' (Gupta, 1995) that shape small reservoir projects in Ghana. To do so, we focus on a few salient features drawn from the 'states at work' literature that are of interest to our study.

It appears crucial to understand current perceptions, practices, and processes in light of the history of state formation in West Africa. First, the way the colonial state apparatus was organised and functioned paved the way to the emergence of a 'political-bureaucratic' elite at independence (Bierschenk, 2010). This had long-lasting consequences and the interdependency between the bureaucracy and the political realm can still be felt today, as observed by Laube (2009) who states that "as a civil servant, the project manager [of the Tono irrigation project] career like any others in the civil service depends on good political conduct". This also came to the fore during our investigation as we learned that a high ranking civil servant was demoted and transferred to a district after he failed to follow the recommendations of the Minister about who should be awarded a contract (KII7, KII8).<sup>6</sup> Collusion between civil servants and politicians is common and, a decade ago, the majority of Ghanaians believed that corruption was mostly perpetuated by these two categories of actors (CDD-Ghana, 2000). By interfering in bureaucratic decision making to expand their clientelistic network, politicians undermine the institutions of the state (Laube, 2009). Bureaucratic control mechanisms and monitoring and evaluation departments have been side-lined (Bierschenk, 2010); sanctions (including anti-corruption measures) are perceived as politically motivated, hence largely de-legitimised.

Second, sub-Saharan Africa has been the focus of intensive yet dramatically shifting development policy interventions mostly generated from outside (see Ellis and Biggs, 2001 for a description regarding rural development). Successive development paradigms "have deposited in the African bureaucracies (sic)" leading to the fragmentation and the proliferation of institutions (Bierschenk, 2010), often in the

<sup>5</sup> By 'micro-differences' we mean the suite of small adjustments to 'planned' activities and or 'imagined/envisioned' relationships that characterise everyday practices of multiple actors.

<sup>6</sup> KII7, KII8, etc. are numbers given (see References) for various Key Informant Interviews, e.g. KII7 means Key Informant Interview No. 7.

form of 'projects' that have long been (and some would say still are) the preferred way to channel development aid and support. The 'reign of projects' is at the basis of what has been coined the 'two-speed bureaucracies' in which donor-led projects run alongside the everyday activities of line agencies.<sup>7</sup> Inconsistencies in the everyday work, constraints and benefits of civil servants and a widely recognised need for coordination and improvement of aid effectiveness led to the Paris Declaration on Aid Effectiveness in 2005. The Paris declaration calls for policy-based budgetary assistance to national governments. However, even in this configuration, projects often "tie up the resources of national bureaucracies [to specific activities...] and deflect the energies of the officials working there from all other tasks" (Bierschenk, 2010; Blundo and Olivier de Sardan, 2003). Donor-led projects would then provide perverse incentives to civil servants while, at the same time, development partners formulate policies, codes and regulations in response to the problem of corruption that is seen as a major obstacle to development programming (for instance, OECD, 2005; IFAD, 2005).

But the 'two-speed bureaucracy' is nothing more than the tip of the iceberg. The fragmentation and disintegration of the bureaucracy (reinforced by the Structural Adjustment Plans of the 1990s and a lack of vision and steering at the top) have led to the production of a large range of informal rules within the bureaucracies themselves and to the de-facto co-production of public services by public and private actors. Rather than a loss of bureaucratic control (as suggested by Laube, 2009), what we observe is an "informalisation of the formal", that is, a de-facto informal appropriation of administrative action and/or rules by actors within or outside the state.

Intertwined formal processes and informal practices in which various actors (both state and non-state) participate constitute both the backbone of corruption and a challenge to tackling the issue (the room for manoeuvre is rather narrow; Blundo and Olivier de Sardan, 2003). Indeed, corrupt practices are embedded in, and legitimised by, a variety of complex norms, social values and logics of negotiation, gift-giving, solidarity, predatory authority and redistributive accumulation (see Olivier de Sardan, 1999 and Blundo and Olivier de Sardan, 2003 for a detailed description of the social norms that influence the practices of corruption). It is the inadequacy of official rules and regulations, often ill-adapted to the "dysfunctional state system" described by Blundo and Olivier de Sardan (2003) that generates the production of these practices and informal norms. The latter enable the minimal functioning of the state but in a fundamentally unpredictable and selective way; they reinforce the state's functional problems, create uncertainty and pave the way to, and reinforce, corruption (Bierschenk, 2010; see also Hobbs, 2005 on the functional role of corruption in World Bank projects).

The following sections discuss public action and corruption dynamics in the case of small reservoir projects in Ghana. The elements put forward by the 'state at work' authors remain the primary explanatory factors for the observed practices. Nonetheless, we implicitly draw on the Weberian notion of 'ideal-type' as a heuristic to assist in the analysis, with full recognition of its limitations.

## OVERVIEW OF SMALL RESERVOIRS IN GHANA

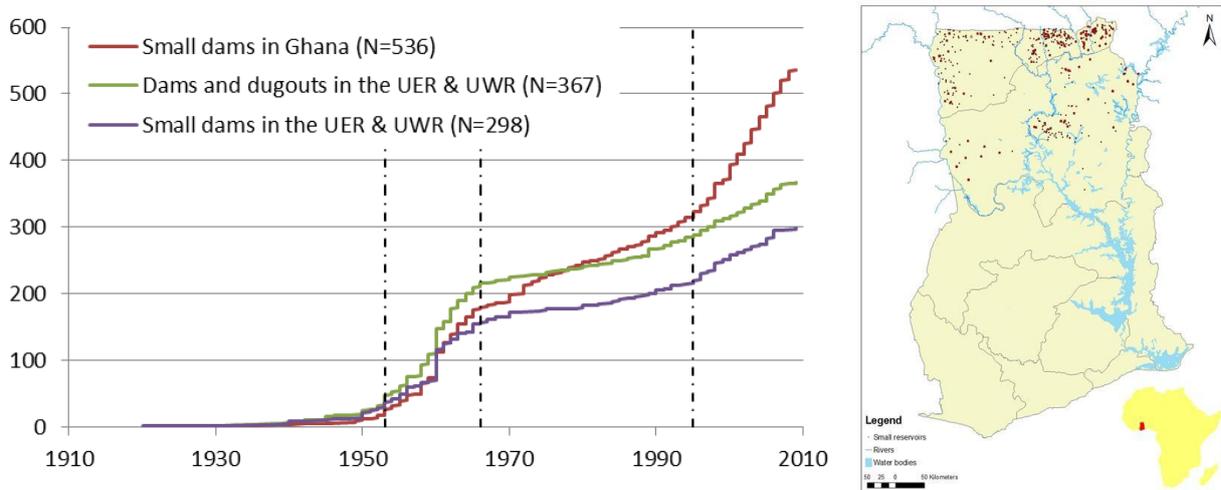
Thousands of small reservoirs dot the landscape of rural sub-Saharan Africa (Venot and Cecchi, 2011).<sup>8</sup> In Ghana, considerable investments were made in small reservoirs following independence in the 1960s. Subsequently, small reservoirs virtually disappeared from the national development agenda (figure 1). The priority was towards an industrially led economic development with medium and large public irrigation systems providing the foundation for a market-oriented agriculture sector.

<sup>7</sup> Bierschenk (2010) defines the two speed bureaucracy as "a state bureaucracy which is completely under-resourced and condemned to inactivity [...] faced with a 'project bureaucracy' with far better working conditions and higher salaries".

<sup>8</sup> In what follows, we consider that small dams (or small reservoirs) are earth or cement dams that can store up to 1 million cubic meters of water. They sometimes have a downstream adjacent irrigated area generally covering less than 50 ha. Dugouts are smaller rainwater harvesting structures. They are located in depressions that have been further excavated (either manually or with machinery) to impound more water but often dry up during the dry season. Dugouts are not considered here.

Since the mid-1990s, there has been renewed interest in small reservoirs.<sup>9</sup> This is mainly due to large donor-driven investments in the north of the country among which are, the World Bank Village Infrastructure Project (VIP), the IFAD Upper West Agricultural Development Project (UWADEP) and Land Conservation and Smallholder Rehabilitation Projects (LACOSREP) 1 and 2. Between 1995 and 2009, 222 small dams were constructed in the country, of which 82 were in the three northern regions. At least another 80 dams were rehabilitated during the same period in the UER and UWR (Upper West Region). The International Fund for Agricultural Development (IFAD) and the Africa Development Bank (AfDB) plan to invest a further US\$30 million by 2015 to build or rehabilitate an additional 50 small dams (Venot and Cecchi, 2011) in the three northern regions of the country.

Figure 1. History and spatial distribution of small reservoirs in Ghana.



Source: This study; based on secondary databases of relevant ministries. The date of construction is available for 2445 out of 3522 dams and dugouts (536 out of 1011 when limited to dams).

While most dams are located in the three northern regions (about half the 1011 small dams inventoried), dugouts are mostly concentrated in the southern part of the country where rainfall is more abundant. Most dams constructed after independence were aimed at soil and water conservation while providing a source of water for domestic and livestock purposes, often in remote communities. Hence, irrigation, and access to roads and markets that are crucial for developing it, was not a primary concern at that time (KII5). On the other hand, recent donor-driven investments have focused on rehabilitating and upgrading existing schemes mainly for irrigation purposes. Today, the success and performance of small reservoirs are assessed vis-à-vis the objective of irrigation development.

While it is commonly recognised that small reservoirs yield multiple benefits for local populations (for instance, Cecchi, 2007) many studies point out their high costs and under-performance with regard to their potential. Scholars then recommend a suite of technical (Faulkner et al., 2008; Mdemu et al., 2009) or institutional interventions (such as investing in water user associations; IFAD, 2009a) to fulfil this potential, but rarely tackle issues related to the planning of investments (a notable exception is Birner et al., 2010) that are paramount for understanding the outcomes of development projects (for instance, Inocencio et al., 2007). This is the focus of the following section.

<sup>9</sup> We suggest that this interest remains sustained because small reservoirs are amenable to multiple discourses among which are the calls for irrigation development and participation.

## **SMALL-SCALE IRRIGATION PROJECTS: ETHNOGRAPHY OF A PROCESS**

This section documents the planning and governance aspects of two small reservoir initiatives implemented in the north of Ghana (UER and UWR) over the last two decades. The first 'initiative' is a small reservoir rehabilitation programme in 2009/10 conducted by the Ghana Irrigation Development Authority (GIDA) and funded by the Canadian International Development Agency (CIDA) through budget support and the Government of Ghana. This rehabilitation programme was initiated after the floods of 2007 washed away scores of small dams in the UER and UWR. The second 'initiative' is the continuous involvement of the International Fund for Agricultural Development (IFAD) since the 1990s through multiple rural development projects that had small reservoir components: 1) UWADEP (1995-2004) in the UWR, 2) LACOSREP 1 (1991-1998), and 2 (2000-2006) in the UER, and 3) Northern Rural Growth Programme (NRGP) (2009-2015) in the three northern regions of the country. The planning, procurement and monitoring of these two initiatives are discussed in parallel in the following sections.

### **Multi-faceted processes: Perceptions, roles and incentives**

#### *Planning of projects and awarding of contracts: Lack of time and politics*

The destruction of small dams in the north of the country during the 2007 rainy season was considered an emergency situation by the Government of Ghana. Following a request of the Minister for Agriculture, GIDA conducted an assessment of the situation in late 2007 and early 2008. Understandably, GIDA regional officials claimed they faced time and funding constraints to conduct a detailed appraisal study (50 dams and dugouts were assessed in 14 days in the UER).<sup>10</sup> They had to rely on pre-existing data (KII1, KII2, KII8, KII9). Several civil engineers admitted that the urgency with which the assessment was conducted had negative consequences on its quality (all informants in the region referred to the assessment as a pre-feasibility study; KII1, KII2). According to regional officials, the lack of detailed feasibility studies prompted contractors to request variation orders<sup>11</sup> that were justifiable as unexpected work was needed. This increased the cost of the rehabilitation programme. This stand was denied by informants in Accra who maintained that appraisals were close to actual works and that differences, if any, could be covered by the 25% contingencies included in the contracts (KII5, KII8, KII9, KII10). For those informants, the variation orders were unnecessary and may have been the result of collusion between regional officials and contractors (KII8, KII9; see below).

The rapidity of the assessment and absence of funds provided to GIDA regional offices (KII2) meant that bidding documents were not always accompanied by the relevant designs, calling into question the quality of the bid itself. As stated by an informant in Accra "whether the designs were really adequate could not be assessed; we had to rely on the technical expertise of the committee [evaluating the bids]" (KII9). Design drawings were subsequently provided by GIDA after the award of contracts, often on the basis of pre-existing data. Finally, the time required to complete the rehabilitation work was underestimated as contracts were awarded for a 4- to 6-month period. IFAD (1998b) states that typical small-dam rehabilitation works should be planned for a 10-month period.

The technical pre-feasibility study was done with diligence but the government did not secure funds before the second half of 2009. When secured, funding amounted to US\$50 million and the momentum the programme had reached<sup>12</sup> as a 'national emergency' demanded that it would be steered from Accra to limit transaction costs (KII5). This can easily be understood as the GIDA Accra office has more capacity and staff than the regional offices, but this de facto centralisation would also lead to implementation and monitoring challenges (see below).

<sup>10</sup> In comparison, IFAD (1998a) states that "it is unrealistic to expect an appraisal mission [lasting two to three weeks] to cast final selection on as many as six sites".

<sup>11</sup> A variation order is a change in the initial design of an infrastructural project.

<sup>12</sup> Comparatively the investment budget of GIDA for 2011 amounts to US\$5 million, two thirds of which were earmarked for the rehabilitation of the Tono irrigation system in the UER.

Though there was no fear within GIDA that the outcome of the presidential election at the end of 2008 would threaten the commitment of the Government of Ghana (the two main parties both held irrigation high in their priority list) (KII4), several informants mentioned that "the process of packaging the lots and awarding contracts was rushed in the [GIDA] head-office before the election (...) and contracts awarded to party faithful in Accra" or that "the selection committee had been briefed beforehand on who should be awarded the contracts" (KII1, KII2, KII9). Award of contracts on the basis of political allegiance and clientelistic networks are a constant in Ghana, regardless of which party is in power (KII8, KII9). For example, some contractors we interviewed considered that they had been sidelined despite previous experience and what they claimed were good records in rehabilitating dams because they had questioned the quality of GIDA's design and supervision work in an earlier project (KII11).<sup>13</sup> Beyond invalidating or confirming such statements, this highlights that the award of contracts is largely perceived and accepted as a political action rather than a bureaucratic one (see also Laryea, 2010). An informant stating that "political patronage is part of our life, but if you show that you are a capable person, this is ok" (KII8) clearly highlighted the acceptability and normativity of patronage as soon as the beneficiary has the capacity to deliver. Preference given to contractors in Accra was also justified on the ground of their "higher capacity" (KII5, KII9) but transport of equipment and staff becomes an issue that large contractors tend to 'solve' by resorting to sub-contracting with negative consequences on accountability and quality of work (KII2, KII4).

Though we have no evidence of illegal financial transactions regarding the award of contracts ('kickbacks' to either civil servants or political parties),<sup>14</sup> other multi-sectoral studies have shown that bribing to obtain government contracts occurred in nearly 40% of the cases and amounted to an average of about 8% of all transactions (CDD-Ghana, 2000).<sup>15</sup> One of our informants recognised the existence of widespread kickbacks but refused to be quoted on this specific issue. A notable insight from our interviews is the cultural dimension of such practices whereby the boundary between what is acceptable and what is not is blurred. This was illustrated by one informant and civil servant: "I'm used to say (sic) to my political bosses that they do not need to befriend any one contractor; everyone will come and say thank you, it is in our culture (...) even I accept gifts (...) problems come when you want to increase what you get by putting your men to get the contracts" (KII10) (see also Laryea, 2010 who highlights the negative impact of kickbacks as contractors tend to overvalue their bid and use low-quality material to recover the corresponding amount).

The extent of political interference is seen as lower in the case of donor-funded projects due to further checks and balances, notably the existence of a donor procurement team that has to sign a certificate of 'no-objection' before contracts are awarded. Documenting IFAD interventions however highlights three shortcomings in the planning of small reservoir interventions, though significant improvements have been made over the last 15 years. First, IFAD and more recently AfDB (as part of their collaboration in the NRGp project) adopted the same 'big-bang' approach that the government adopted in the rehabilitation programme, with ambitious rehabilitation/construction objectives (44 dams in LACOSREP1, 36 dams in LACOSREP2 and 50 dams in NRGp). Such strategies overlook structural challenges such as the quality of in-country construction and supervision and lead to implementation delays and escalating costs (see below). This 'big-bang' approach is adopted even though high-level officials in IFAD admit their difficulties in handling large projects and because performance assessments remain mostly linked to the number of programmes or volume of funding they process rather than to project outcomes (KII12, see also Repetto, 1986; Morardet, et al., 2005; Martinez and Shordt, 2008).

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<sup>13</sup> Most interviewees agreed that GIDA designs were usually of good quality – and much better than most drawings of private companies – though GIDA expertise was questioned in a few instances as were their cost estimates (IFAD, 1998a).

<sup>14</sup> CDD-Ghana (2000) confirms the sensitivity of the issue of kick-backs to politicians when stating that "somewhat surprisingly, in view of all the anecdotal evidence that firms are expected to support the ruling party if they expect to be awarded government contracts, only 6% of firms sampled said they were asked to contribute to party funds".

<sup>15</sup> This is nearly 30% of the value of the incriminated contracts.

Second, despite what can be considered a robust process regarding the formulation, design and implementation of projects, political interference at the highest level can partly explain how the NRGF project came into being in its actual form. The overall idea that underpinned the appraisal of the water resources component of the NRGF (conducted by IFAD) was to find an alternative to small dams which were seen as too challenging and too expensive. A first appraisal report was drafted along these terms but shortly before the project was to be submitted to the IFAD executive board for approval, the AfDB approached IFAD and proposed a co-funding of about US\$60 million specifically targeting rural infrastructure, half of which would be earmarked for rehabilitating and constructing small reservoirs (KII13). We were told that the intervention of AfDB and its focus on rural infrastructure followed a request of the Government of Ghana that was not keen at the direction taken by IFAD (KII13). This also met – and was justified by – a newly internal condition to all IFAD disbursement, i.e. that they are matched by funds equivalent to 150% of the IFAD contribution (KII12), but meant a significant shift in priority. The project had to be revised accordingly and the final project document clearly identifies small reservoirs as a priority area although it mentions possible challenges to implementation (IFAD, 2009a). This example supports claims that donors contribute to reinforce the bias towards capital-intensive technical interventions, which give rise to opportunities for rent-seeking (Molle, 2008). The insistence to invest in small reservoirs is especially noteworthy as all reports we had access to for projects that span over a 15-year period point to the fact that results of such investments are at best disappointing (IFAD 1998a, 1998b, 2009). Integrating interventions of a different nature – funded by different organisations<sup>16</sup> – in a single project brings about implementation challenges and can also be a source of frustration for project implementers and managers as they must accommodate multiple procedures (KII6).<sup>17</sup>

The third shortcoming that was reported, notably in the case of the LACOSREP projects, was that local level (e.g. district) politics had a tremendous bearing on the process of site selection at the expense of more 'objective' criteria such as agricultural productivity, livestock density, distance to water sources, poverty and existence of community arrangements (WUA) though the attention given to those was higher in LACOSREP 2 than in LACOSREP 1 (KII6). Corrupt practices and possible collusion between contractors, GIDA and District Chief Executives are also mentioned by Birner et al. (2010). Finally, though the attention given to WUAs as a way to enhance local ownership is commendable, it appeared to be elusive as "the package of the project [LACOSREP 1] was too attractive to be resisted by any community, hence WUA were set up [but] the deep (...) conflicts which hitherto hindered formation of such groups were 'buried' in favour of the project incentives, only to be unearthed before the expiry of the project" (IFAD 1998a). Though IFAD officials argue that such shortcomings were addressed as part of the LACOSREP 2 project (KII6), field evidence highlights that WUAs remain at best dormant partly because of their confiscation by local elites and their inability to account for multiple users and institutional arrangements that govern natural resources management (Venot, 2011).

### *Procurement processes: Selection and capacity of contractors, conflicting interests and compliance mechanisms*

The Public Procurement Act (GoG, 2003) is aligned with World Bank guidelines. Indeed, the World Bank was instrumental in pushing the legislation so as to harmonise multiple procedures that were followed in the country until then (KII7). National competitive bidding is resorted to for all contracts smaller than US\$5 million for which in-country capacity was considered adequate, and contracts are awarded to the lowest qualified bid. This was the case for the small reservoir rehabilitation programme whereby only

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<sup>16</sup> In the collaborative NRGF project, AfDB specifically focuses on, and finances, rural infrastructure while IFAD finances the other components: targeting and gender, strengthening of producers' organisations, commodity chain development and agricultural technical knowledge.

<sup>17</sup> For instance, at first, IFAD and AfDB were planning to conduct distinct supervision missions. Morardet et al. (2005) also highlight the negative consequences of multiple procedures of multilateral organisations.

contractors having A3/B3 licenses and above were considered, as well as for IFAD projects. Despite this cut-off point, and the fact that contractors had to submit a GIDA training certificate,<sup>18</sup> a bid security, a tax security, proof of ownership or access to adequate machinery, and describe their workload and past records to qualify, their capacity to conduct small reservoir rehabilitation works is questionable.

Most contractors are not specialised in irrigation but, rather, in basic infrastructure (roads, buildings) (KII2, KII3, KII6).<sup>19</sup> They lack adequate machinery and rent it from distant partners in Kumasi or Accra who enter into many such agreements beyond their renting capacity, thus leading to implementation delays (KII3, KII4, KII6, KII9). Further, the stringency with which contractor's licences are issued was openly questioned by several informants stating for example that "in the region, everyone is a contractor" (KII1). The volatility of the sector and the difficulty of tracing contractors were clearly illustrated during our investigation whereby several contractors had left the country and/or 'closed shop' less than 2 years after they had been awarded contracts. Finally, collusion and conflicting interests seem to be the norm rather than the exception. Indeed, though contractors do not officially interact with GIDA and/or project management units that are in charge of selecting bids and supervising works, our interviews revealed a system whereby all actors know and interact with each other in multiple ways. Most civil engineers have, for example, been trained in the same department at the Kwame Nkrumah University of Science and Technology in Kumasi and often wear multiple hats. Therefore, it is not rare to find that contractors hire former or current GIDA employees as advisers, as designers, or even simply as quantity surveyors to increase their chances of obtaining a contract. This was said to underpin GIDA credibility and authority (KII3, KII4).

Beyond questions of capacity and collusion, several informants mentioned that "the [procurement] law is good; its implementation is a problem" (KII8, KII9). Notably, the contracts appear not to be really binding. The government does not claim liquidated damages (generally 10% of the contract's amount is set aside for defect liability) in case contractors fail to complete the job in time and seldom terminate contracts.<sup>20</sup> Resorting to this clause was indeed seen as unfair by all civil servants we interviewed given the delays in payment that contractors face (KII1, KII9, KII9, KII10). Contractors, on the other side, do not claim interest on late payments for fear of being side-lined in a context where political patronage determines working opportunities.<sup>21</sup> The importance of maintaining a 'fair relationship' between contractors and public authorities was similarly highlighted by Wade (1982) in the Indian context. Other shortcomings of the Public Procurement Act were identified by procurement specialists (KII7, KII9):

- A too short minimum period of time for bids to be prepared after the call is publicised (14 days in the Act against 30 in the World Bank guidelines). This gives way to low quality bids (site visits are seldom conducted due to time constraints, with risks of underestimation of the actual workload) and possible forging of bid security (for time constraints too; see below).
- An ambiguity regarding the validity of international bids for contracts of less than US\$5 million. This is seen as an indirect domestic preference that may undermine quality of works.
- Outdated clauses regarding fraud and corruption and notably the lack of audit right and post-review mechanisms (e.g. access to contractors' documents if fraudulent practices are suspected, though a right for review is mentioned in the procurement act) and the absence of sanctions on contractors submitting forged documents.

<sup>18</sup> The GIDA training was triggered by a World Bank/FAO study highlighting that the lack of capacity of contractors was a major cause of 'failure' of past investments in small reservoirs (World Bank and FAO, 2007). A study by Laryea (2010) also identifies lack of capacity as a major constraint in regard to contractors in Ghana.

<sup>19</sup> Some of the contractors we interviewed, for example, managed simple welding shops.

<sup>20</sup> GIDA regional officers have reported that not a single contract awarded as part of the rehabilitation programme was terminated despite clear evidence of misconduct on the part of some contractors.

<sup>21</sup> The importance of political patronage can transpire in the name of companies such as 'My turn'.

- The perceived lack of independence of the Public Procurement Board (PPB); notably the lack of firm commitment towards 'black-listing' of contractors as a consequence of political interference (the members of the Board being "appointed by the President acting in consultation with the Council of State"; GoG, 2003).<sup>22</sup> Further, public servants cannot formally submit a case to the PPB because this would be considered as insubordination towards their sector Minister who has authority over the signature of contracts.

These shortcomings affect government and donor-supported projects alike as the latter use the state machinery at national and/or regional levels for their procurement activities. Both in the case of the recent rehabilitation programme and the IFAD projects, contractors answered to open bids that were published in local newspapers (KII2, KII3, KII4, KII9). In the case of IFAD projects, the project coordinating unit provided the bidding documents and received and evaluated the bids though it had limited expertise (at least at first) to assess their quality (IFAD, 1998a). In the case of the recent rehabilitation programme, bidding documents could be obtained and should be submitted to the procurement office of the Ministry of Food and Agriculture (MoFA) and a committee including the Chief Executive of GIDA, two GIDA engineers (including the Deputy Chief Executive), a member of the procurement office and a member of the budget office was set up to evaluate the bids. After evaluation, the award of contracts was reviewed by a tender review board, whose members are appointed by the Minister according to the provisions of the Public Procurement Act (GoG, 2003) and included three GIDA engineers, two MoFA officials, two persons from the MoFA procurement office, the Chief Director and Finance Director of MoFA.

Though the procurement office of MoFA was described as "knowledgeable, willing to learn from others in the sector and firm in the way it handles contracts" in comparison to people in the road sector who are "simply corrupt", it is "also victim of political interference" (KII7). Several informants (KII7, KII9), for example, recognised that the procurement office generally knows that it awards contracts to companies that do not have the capacity to conduct the work. They rely on informal information that they cannot use in the selection process. Here we touch upon the fact that multiple forms of informal knowledge exist; some of which is ignored, some of which is considered – also depending on who channels the information. This suggests that procurement is a struggle over information and its uses.

An often overlooked issue is the pivotal role of banks in the procurement process. The bid security is indeed one of the key documents that need to be submitted to obtain a contract. However, most contractors have running loans (KII2, KII9) and banks prove not to be very particular about delivering such bid security as it is a way for them to ensure that those loans will be settled (funds are directly transferred to the contractors' banks). Forged bid security was referred to as a common practice (KII6, KII10), pushing government and donors alike to tighten the rules over their issuance through specific checks and more stringent requirements concerning bank staff member having the authority to sign.<sup>23</sup>

Informants involved in the implementation of IFAD projects recognised that they faced the same issues regarding bid evaluation, including collusion and forging of official documents (KII6). As this was not initially envisioned, no-objection orders were hastily signed and contracts awarded to companies that did not deliver (KII6). With increasing evidence of the latter (only 6 out of 36 dams had been rehabilitated by 2004 as part of the LACOSREP 2 project) and the appointment of a new project coordinator, almost half the contracts were terminated and re-awarded. This led to a significant increase in costs (see below) without noticeable improvement in the quality of works (IFAD, 2009a). Further checks of bidding documents are currently envisioned as part of the NRG project (KII6) though it remains unclear to what extent the project management unit will be able to enforce them on a

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<sup>22</sup> The idea of black-listing poor performing contractors is currently being considered by GIDA (KII5) but how this list will be used remains uncertain as only the Public Procurement Board has authority over disqualifying contractors from public tenders.

<sup>23</sup> As for contractors, black-listing or prosecuting banks that repeatedly issue fraudulent documents could be considered.

systematic basis.<sup>24</sup> Finally, and in contrast to the national procurement system, IFAD's experience with the regional procurement system in LACOSREP 2 seems positive; it significantly decreased transaction costs and facilitated supervision activities though a high level of political interference and contractors' low capacity are seen as major stumbling blocks (KII2, KII6). As the NRGp is cast as a nationwide project, the national procurement system will be resorted to. A senior member of the project coordinating unit feels that the "procurement [office] is overwhelmed [... but the] project is important (...) things will happen" (KII6), hence pointing out to an informalisation of the process whereby influence and personal relationships are as important as formal rules and procedures, and allow for a minimal functioning of the system – though on a selective basis.

#### *Payment of certificates: Delays and petty corruption*

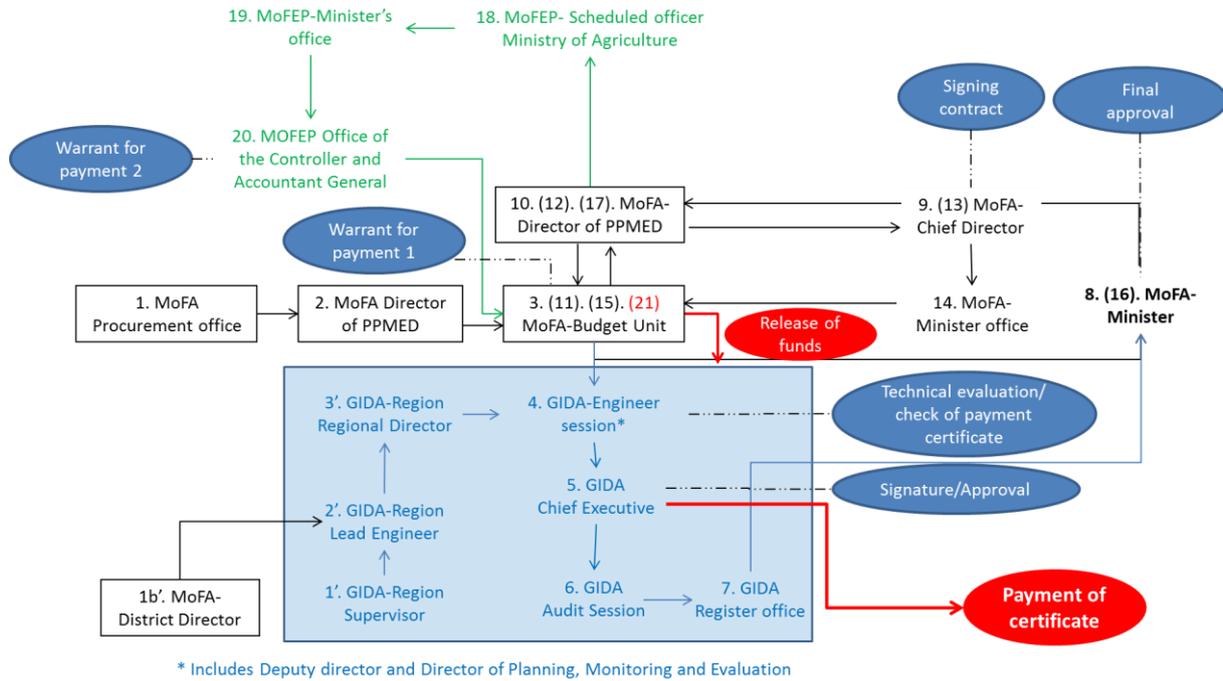
Both IFAD projects and the recent rehabilitation programme conducted by GIDA have suffered from inadequate cash-flow due to cumbersome procedures (for instance IFAD, 1998a and 1998b; see figure 2). Delays in payments have been a major threat to the sustainability of rehabilitation and construction works. In the case of the GIDA rehabilitation programme, contractors received preliminary payments 2 to 4 weeks after signing the contract (this constituted the contribution of CIDA to the programme). Apart from this initial payment, the rule was that contractors would be paid after submission and endorsement of payment certificates. The endorsement process is described in figure 2 and was perceived as cumbersome by most informants who identified more than 20 steps between the supervision visit and the payment of the certificate. The budget office of MoFA is central to the process.

Complexity and lack of transparency were openly discussed during interviews with contractors who readily admitted the need to resort to petty corruption and 'speed money' to facilitate the endorsement process. On the other hand, lobbying and corrupt practices to get the contracts were hardly mentioned (see above). Petty corruption does not seem to be of any financial significance but contractors highlighted their high transaction costs in following through the process as this required regular visits to the relevant offices of MoFA and GIDA in Accra, something that is difficult for small contractors located in the UER and UWR (KII3, KII4). Delays in payment (Laryea, 2010) and complex procedures (CDD-Ghana, 2000) are commonly identified as a major obstacle to doing business with the government, especially for small- and medium-sized companies. Pressure tactics were resorted to by contractors who lobbied as a group, using the leverage of the most influential of them, to expedite payments by MoFA (the Ministry of Finance and Economic Planning – MoFEP – appeared to be out of reach of contractors) (KII3, KII4, KII9, KII10). This echoes an observation by Krueger (1974) (in Wade, 1985) who highlights that since contracts are seen as a way to confer rents, contractors tend to have their main office in the capital city where actual decision making takes place so as to increase their chance of obtaining contracts (this is commonly called lobbying in Europe and the US!).

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<sup>24</sup> There is also anecdotal evidence that NGOs are more stringent regarding selection of contractors but they often run into other problems of accountability between the contractor they select and GIDA that is in charge of site supervision (KII11).

Figure 2. Endorsement process of payment certificates.<sup>25</sup>



Source: Interviews with multiple contractors and governmental officials (see References)

NB. The colour code indicates in which organisation the different steps of the process take place (blue for GIDA; black for MoFA and Green for MoFEP). The red and blue oval shapes indicate major actions along the process. Finally, the numbers indicate the temporal succession of the different steps of the process. In many instances, several numbers accompany the same actor; this means that the latter is involved at different steps of the process. Regarding tendering, the process is initiated by the procurement office of MoFA which does not have any role thereafter; for successive payments of certificate, the process is initiated by the MoFA District Director and the GIDA staff in charge of supervising the works; there are then several loops within MoFA between the budget unit and the Director of the Policy, Planning, Monitoring and Evaluation Department (PPMED) before the certificates are forwarded to MoFEP for approval and successive payment through MoFA and GIDA.

According to contractors interviewed, the internal back-and-forth communications within MoFA and the involvement of the Minister at several stages of the process (see figure 2) were the main reasons for long delays in payments. This was confirmed by GIDA officials who stated that the request of the Minister to see a self-explanatory cover letter before approving any documents further delayed the process (KII5).<sup>26</sup> Some delays were also rooted in further probing the validity of the recommendations made by GIDA regional offices regarding the need for variation orders as these had not been properly formalised and had been questioned by the budget and procurement office of MoFA which was under scrutiny after fraud allegation had been made public (KII5, KII9, KII10). While it was initially envisioned that payment certificates would be processed in 2 weeks, it took an average of 2 to 3 months in the first

<sup>25</sup> The figure does not claim to be an exact representation of the process but of its complexity. It describes the perceptions of the process from multiple standpoints. Though there were notable differences between the perceptions of contractors, GIDA and MoFA officials due to their respective proximity and involvement in the process all highlighted the intricacy of reporting mechanisms. Accounts by GIDA officials were significantly different to those of contractors and MoFA officials. This highlights a true de-linking between supervision and administration of contracts that might have positive (independence of the supervising entity) and negative (lack of accountability and transparency) consequences. As GIDA is a semi-autonomous agency under MoFA, it is entrusted with the tasks of supervision and monitoring of payment certificates while those tasks are usually the remit of the procurement office of MoFA for other interventions.

<sup>26</sup> This request was allegedly motivated by the investigation the programme was facing (see below).

stages of the programme. This led contractors to get loans, a process facilitated by the fact that MoFA delivered 'joint-payment' letters to contractors to use as guarantee, pending government funds.

Though they admitted internal shortcomings, MoFA officials ascribed most delays to MoFEP, who had put an embargo on any government payments shortly after the elections (KII5, KII8, KII10). Inadequacy of government matching funds is also common in donor-funded project (for example, IFAD, 1998a). One of our informants described a vicious circle whereby due to delays in handling payment certificates funds get reallocated to other activities towards the end of the financial year. When finally submitted, the corresponding budget provisions are not available anymore, making it necessary to put forth a new request for funds to MoFEP, further delaying the process (KII10). In the summer of 2010, contractors mentioned they had been waiting for their last instalment for more than 10 months, because they had to raise variation orders. Key interviews mentioned that payments were still pending by mid-February 2011 (KII8, KII10), that is, more than 2 years after the award of contracts that were meant to last 4 to 6 months.

Regarding IFAD and other donor-funded projects, payments are directly handled by the project coordinating unit. However, capital outlays of more than US\$20,000 (e.g. most disbursements for small dam rehabilitation) have to be directly approved by the Country Portfolio Manager who until recently sat in Rome. This implied significant delays in payment during the LACOSREP 1 and 2 projects and is still an issue in the current design of the NRG project (funds will be approved by the corresponding project officer of AfDB, sitting in Tunis, and similar delays are expected; KII6; see also Morardet et al., 2005 and Leurs, 2005 who highlight the widespread nature of disbursement delays).

#### *Supervision and monitoring: Lack of accountability*

By their sheer scale and nature, the initiatives described here require qualified and full-time supervision and monitoring. These seem to be lacking. Criticisms about the quality of work, the lack of capacity of local contractors and supervising agency (GIDA), and the accountability structure were a common feature of most interviews we conducted (see also IFAD, 1998a, 1998b, 2009).

In the case of the rehabilitation programme and earlier IFAD projects (LACOSREP 1 and 2 and UWADEP), GIDA's role was to monitor the quality and progress of the work done by contractors. Site supervisors in the regional offices are in charge of the day-to-day monitoring; monthly supervision visits from the GIDA head office are organised to check progress. However, GIDA regional offices appear to be ill-equipped and under-staffed to conduct their supervisory role. For example, each of the UER and UWR GIDA offices has a single vehicle at disposal and their respective five staff members were entrusted with site supervision. This meant that, on average, each staff member had to supervise 11 and 4 sites concomitantly in the UER and UWR, respectively. It is commonly recognised that the daily presence of a knowledgeable supervisor is needed to ensure good quality earthworks such as small reservoirs (KII2, KII5). Low salaries,<sup>27</sup> high turnover and the little experience of site supervisors, most of whom have graduated recently, were also identified as challenges to proper supervision (KII1, KII2).

Beyond these structural bottlenecks, the lack of clear accountability mechanisms seemed to constitute further challenges to the implementation of the rehabilitation programme. GIDA officials in the regions appeared both 'under pressure' (by contractors and the head office in Accra) to endorse and forward payment certificates to the head office (while lacking the means to conduct proper supervision) and 'side-lined' as all logistics pertaining to contract payments were directly handled in Accra (KII1, KII2). Informants in the regions indeed perceived a lack of accountability of contractors towards the regional level as fund transactions were handled directly between Accra and the

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<sup>27</sup> In 2000, 80% of public officials regarded low salaries as the leading cause of corruption in addition to a culture of gift-giving, the absence of positive incentives, a weak corruption reporting system, and poor internal management practices (CDD-Ghana, 2000).

contractors. This view was disputed by officials in Accra arguing that site possession visits<sup>28</sup> and letters sent to the District Assemblies should have clearly established the accountability mechanisms and strengthened the position of GIDA regional offices (KII7, KII9). It appears however that "contractors were introduced to the sites and it was planned that site possession would be organised later because of the large number of contractors involved but this was not done. Resources were not provided for this activity to be undertaken" (KII2, email communication 17 September 2010).

One of the major impediments to proper supervision is the lack of independence of GIDA officials who depend on contractors to visit the sites as they do not have their own vehicles. Hence, they tend to be more flexible with their supervision or simply "visit the sites after activities such as key trenches, excavation and compaction have already been completed" (KII2).<sup>29</sup> This interdependency between site supervisors and contractors was framed in terms of 'reciprocity' rather than 'corruption', openly discussed and widely accepted by all informants. It appears that this reciprocity was also a feature of IFAD projects, though it was 'breached' in a few instances due to stringent supervision by zealous supervisors who were subsequently transferred to another region following pressure by contractors (KII6). Some NGOs who entrusted GIDA with design and supervision tasks seem to have found an answer to this interdependency by providing motorbikes and fuel to site supervisors. This was also initially planned in the rehabilitation programme and contracts provided for such provision in the preliminary payments but this was not enforced (KII2). Rather than deducting all supervision costs at the onset from the preliminary payments done to contractors, GIDA deducted 10% from all payment certificates for conducting its supervision role. This meant that only limited money was available for supervision at the beginning of the programme. Further, lack of communication on this arrangement led to complaints by contractors and claims of overvaluation of contracts (KII5).

Unclear accountability mechanisms between GIDA regional offices, GIDA head office and contractors seem to pave the way to corrupt practices that are rooted in a widely shared frustration as all actors realise they are not in a position to do their jobs properly. In this context, the recent irrigation policy was welcomed by GIDA regional officials who see it as an opportunity for more effective decentralisation of decision making (GoG, 2010a). Indeed, it provides the scope for preparing regional development plans and budgets that, they think, could form the basis of a true deconcentrated accountability system whereby the head office would be held accountable for its action towards the regions (KII1, KII2). How the policy will be implemented however remains to be seen. As it stands, regional offices in the UER and UWR seem to have very little leverage and often need to function without any administrative and operational funds – a reality of GIDA as a whole.

Accountability mechanisms constituted the core of the problems faced by UWADEP and LACOSREP 1 and 2 as well. Informants (KII6) and IFAD reports (IFAD, 1998b) point to the weak supervision capacity of GIDA and to its failure to properly check bidding documents. The supervision challenges faced during the rehabilitation programme tend to confirm such diagnosis. It needs however to be pondered, as IFAD bears some responsibility as well. First, the project coordinating unit is partly responsible for failing to check bidding documents (see above). Second, though it was identified as a problem (IFAD, 2006), weak supervision was not addressed as the "[project] coordinating unit could not exercise effective supervision because it lacked the necessary expertise". Third, it is unclear why no independent entity was entrusted with the task of assessing GIDA's performance though this was a recommendation of the LACOSREP 1 evaluation mission (IFAD, 1998a). Fourth, it appears that contractors were barely accountable to GIDA as contracts were awarded and managed by the project coordinating unit (KII2). Finally, GIDA officials felt they had little leverage to ensure that their recommendations were

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<sup>28</sup> Visits during which the contractor takes official responsibility for the site, in the presence of the relevant authority (in this case, GIDA and a representative of the District Assembly).

<sup>29</sup> Another key loophole is the lack of proper attention given to compaction tests. Though results of compaction tests must be attached to any payment certificate, this is rarely done and seldom asked for by GIDA (KII2) as it does not have the resources, or a laboratory to conduct its own compaction tests and rely on contractors to seek a test from the Ministry of Highway, whose accountability to GIDA is nil.

considered. Our informants justified this on the ground that GIDA was never formally appointed to the project coordinating unit though it was initially envisioned in the design of the project (KII1, KII5). The reasons the GIDA officials were not officially part of the project coordinating unit are unclear but illustrate the complex relationship between GIDA, its sector ministry (MoFA), and international development partners.<sup>30</sup> Weak supervision and accountability led IFAD to resort to an international company for supervising all infrastructural works in the NRG project.<sup>31</sup> While this may be a step towards more professional supervision, it remains unclear how an international company will handle the structural bottlenecks inherent to the supervision of multiple small-scale projects that are difficult to access and scattered over a large area.<sup>32</sup>

### *Checks and balances: The limits of a national enquiry*

Following increasing evidence that rehabilitation works were of poor quality, allegations of corruption and overvalued contracts made public on the internet (Ghana web, 2009) and complaints filed by communities through their members of parliament – and ministers (KII2, KII3), the Bureau of National Investigation (BNI) opened an investigation on how GIDA/MoFA handled the small reservoir rehabilitation programme. The investigation shows a certain level of accountability and responsiveness to public pressure – voiced through political representative, but its implementation proved to be uneven. First, investigation and sanctions are seen as politically motivated, hence largely delegitimised for most civil servants who consider them "as routine and generally grounded in fraud allegations from jealous contractors who felt they have been side-lined by civil servants on political grounds" (KII9). Second, the scope of the investigation can be questioned. As an informant puts it, "the investigation is good (...) all documents are ok anyway, we make sure to clean the book" while, at the same time, spotting irregular practices require delving into the details of the bills of quantity – something that requires a certain expertise (KII8). Third, the integrity of BNI officials is often questioned by civil servants from other departments and ministries. Their lack of capacity in, and understanding of, procurement processes and contract management is also pointed out (KII5). An informant from a GIDA regional office, for example, mentioned that a GIDA official based in Accra visited him together with the BNI. The objective of the visit was to inspect the progress of the rehabilitation programme in the region. Instead of joining the mission, our informant mentioned that he was politely told not to visit the sites with the two visitors. Upon their return, the BNI official, also a public work contractor, argued for using the remaining funds of the programme<sup>33</sup> to rehabilitate a public guesthouse whose condition did not seem to require any further investment (KII2). The initial results of the enquiry confirming fraud allegations were questioned, requiring the intervention of the Serious Fraud Office. At the time we write, both investigations have been closed and no sanctions have been taken. Such insights confirm existing findings whereby top-down anti-corruption measures have been shown to be largely ineffective (Olivier de Sardan, 1999; Blundo and Olivier de Sardan, 2003; Rinaudo, 2008) as they do little more than create a new layer of bureaucracy without modifying the incentive structure.

### **Lapses in planning: Impacts on investment costs and performance**

This section investigates the impacts of the shortcomings described above in terms of investment costs and performance levels of small reservoirs. Admittedly, we only provide a partial assessment, yet it

<sup>30</sup> Both in UWADEP and LACOSREP 2, the regional director of MoFA acted as the project coordinator.

<sup>31</sup> The country portfolio manager is also entrusted with the monitoring of projects while this was conducted by project coordinating units in earlier projects (KII12).

<sup>32</sup> Morardet et al. (2005) highlight that projects consisting of several small-scale irrigation schemes are often characterised by low-quality feasibility studies (design, financial aspects, planning) due to the relatively small amount of investment in each scheme. This makes supervising and monitoring especially demanding.

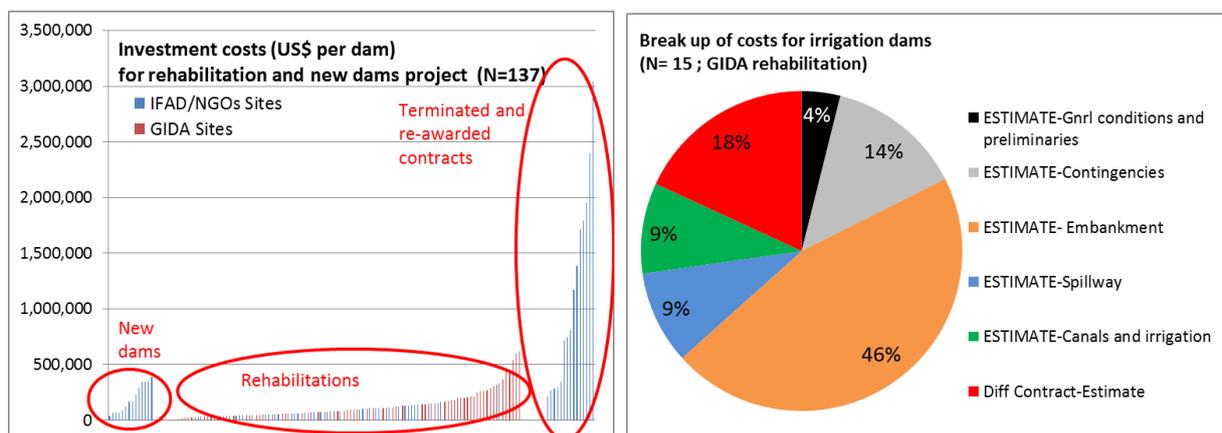
<sup>33</sup> Our informant stated that the two visitors grossly overestimated the remaining funds as they did not account for pending payment certificates that had been submitted by contractors and were processed in Accra.

remains central as small reservoirs are commonly criticised for their high costs and low performance in regard to their potential. We rely on secondary data provided by IFAD, NGOs and the Government of Ghana for investment costs<sup>34</sup> and on primary data collected with agricultural extension agents as far as performance levels are concerned.

First, the left panel of figure 3 clearly highlights the importance of the planning and procurement processes in controlling investment costs. Where contracts were terminated and re-awarded (either due to fraudulent practices or low performance on the part of contractors), investment costs ended up ten times higher than when contracts were handled without major setbacks. Second, GIDA and IFAD invested similar unit costs for rehabilitation of dams (e.g. about \$10,000 per ha; not shown), except in a few instances where modern irrigation systems were laid out as part of the GIDA programme.<sup>35</sup> Third, all informants clearly mentioned that delays in implementation had tremendous impacts on investment costs, especially in a high-inflation context.<sup>36</sup>

The right panel of figure 3 shows the breakdown of cost by categories of expenses for a selected number of 15 irrigation dams for which data were available. It is clear that embankment works constitute the bulk of the costs, which was to be expected as most dams were breached due to floods.

Figure 3. Cost of investments in small dams in the UER of Ghana.



Of further interest regarding corruption, we use a larger and more representative sample of 40 dams for which data on technical financial estimates, total contract costs, and preliminary payments were available. Contract amounts were 35% higher (not accounting for the above outliers)<sup>37</sup> than technical estimates provided by GIDA regional offices. This is partly due to differences in the rule of thumb adopted regarding contingencies that were fixed at 20% by some regional offices and at 25% in contract documents. Further changes in design through variation orders because technical studies were done hastily may be another reason for such differences. But this alone falls short of explaining a 35% discrepancy that tends to support claims of contract overvaluation (see above).<sup>38</sup> The case of preliminary payments (e.g. mobilisation costs) is particularly interesting. While they average 18% in the

<sup>34</sup> Investment costs discussed here are as planned in contract documents. It was impossible for us to assess actual costs (e.g. after variation orders were raised and interests due to delayed payments accounted for). One of our informants however suggested that cost overruns could reach nearly 50% of the planned investment (KII9).

<sup>35</sup> Six of the dams rehabilitated by GIDA cost more than US\$350,000 per dam. Some of these rehabilitation activities were done alongside other infrastructural investments funded by the African Development Bank, clearly illustrating the preference of the latter towards capital-intensive interventions.

<sup>36</sup> By August 2010, only 10 out of 45 lots had been completed.

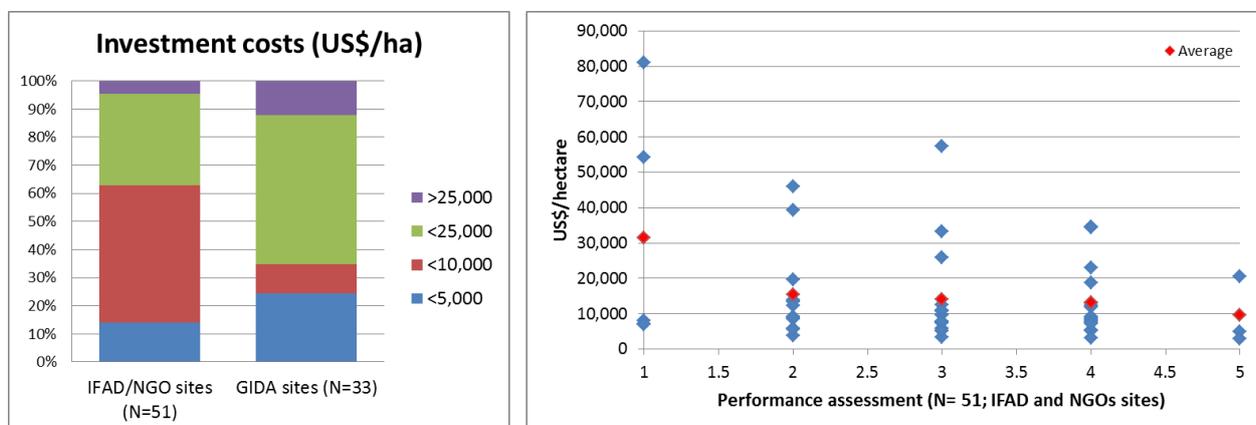
<sup>37</sup> This figure drops to 18% if the analysis is limited to 15 dams considered in the right panel of figure 3.

<sup>38</sup> Though we do not have any financial evidence in the case of sites that have been rehabilitated by IFAD, the similarity of per-unit investment cost may mean that IFAD contracts were equally overvalued (this remains to be investigated).

sample of 40 dams (4% only for the dams considered in the right panel of figure 3), they also vary between 4 and 65% of the total contract amount without any clear pattern or justification.<sup>39</sup> This is allegedly to conceal various forms of kickback and "had been noticed [by the procurement office] during the award of contracts, but not acted upon as it was clear that contractors had been preselected on the basis of political allegiance" (KII8). Controlling such practices could lead to significantly lower investment costs in small reservoirs. The left panel of figure 4 clearly highlights that this is not a vain quest: 25% and 12% of the dams rehabilitated by GIDA and IFAD, respectively, cost less than US\$5,000/ha (a proportion that increases to 35 and 60% if a US\$10,000 threshold is considered).

Shortcomings in the planning and procurement phases not only induce higher costs but have dramatic consequences on the performance of small reservoirs. The right panel of figure 4 clearly highlights a negative correlation between investment costs and performance levels: the best performing sites<sup>40</sup> are those that cost less, as also illustrated by Inocencio et al. (2007).

Figure 4. Per-unit investment costs (US\$/ha) and performance of small dams.<sup>41</sup>



## DISCUSSION: ENHANCING THE PERFORMANCE OF SMALL RESERVOIRS

The above analysis is nothing else but a case study. The documented planning and management lapses are not confined to Ghana or to sub-Saharan countries but can be found in most planning exercises. This is because all formal organisations require informal rules and practices in addition to formal ones to be able to function (Biershenk, 2010). This creates fuzziness that can breed corrupt practices. Further, government officials are aware – and show some level of commitment to address – many of the shortcomings we highlight here (Venot et al., 2011). Tackling (perception of) corruption has long been on the government agenda, notably the specific issue of low transparency and accountability of public officials (GoG, 2010b). Ghana's recent Shared Growth and Development Agenda (GoG, 2010b), for example, recognises the current "weaknesses of anti-corruption institutions in terms of capacity and also in terms of their collaboration". It also marks a strong engagement towards fighting corruption via the enforcement of existing enactments pertaining to public procurement, internal audit, public financial management and the whistle blower law; the enactment of the Freedom of Information Bill;

<sup>39</sup> According to informants, possible reasons for such differences include: the location of the contractors and the size of the company, both having a positive correlation with the amount of mobilisation costs. These claims were not confirmed by the data. Preliminary payments of 65% are an indirect 'invitation' for the contractor to leave the site without conducting any work.

<sup>40</sup> Performance was qualitatively assessed on a scale from 1 (very poor) to 5 (very good) by extension agents of the Ministry of Food and Agriculture.

<sup>41</sup> We do not present performance assessment levels for the dams rehabilitated by GIDA as most dams were broken or under rehabilitation at the time of our surveys in 2009, hence ranking low.

and the formulation and implementation of a fair wage policy, which could significantly reverse the current perverse incentives towards corrupt practices.

Such commitment can only contribute to limiting the negative impacts of corrupt practices. But it is also important to recognise that corruption finds its breeding ground in the workings (daily practices) of multiple actors all along the project cycle, hence calling for context-specific interventions (see also Hobbs, 2005). Corrupt practices are not an 'essential' characteristic of the Ghanaian state or its development partners; they are underpinned by broader social dynamics including a culture of patronage, structural challenges to the working of the state, and the broader political economy of development – notably, the interplay between the national government and international donors and a perverse incentive structure leading to valuing fund disbursement rates over project's outcomes.

Table 1 below is inspired by the framework proposed by Plummer (2008). It is an attempt to structure these multiple interdependencies. The 'deficient relationships' we identify here are drawn from the multiple insights discussed above. Not all issues pertain to all projects, nor is any single project concerned by all shortcomings listed in the table. A few 'categories' in the table are left empty; this does not mean that they are not relevant in the case of small reservoirs but that we do not have enough evidence on these specific questions through our case study. Such 'mapping' allows understanding the incentives of multiple actors, the potential conflicts of interests and the hot spots that are most vulnerable to capture. This is useful to identify possible ways of lessening the negative consequences of such capture. This discussion does not identify normative recommendations or recipes for success, but highlights multiple issues that are important to keep in mind when designing development interventions and, more specifically, small reservoir projects.

Clearly, the capacity of local contractors could be strengthened not only in terms of construction practice but also in relation to project management, contract administration and compliance. Such programmes have already been initiated (World Bank and FAO, 2007) but the reasons for their limited success need to be investigated. Second, supervision activities of both donors and government projects are faced with major flaws. Staff members generally lack the capacity to administer contracts, they have little means and incentive to do their job properly, and reporting and accountability mechanisms are unclear and conspicuous by the absence of local communities and local government. Restructuring the incentive structure towards downward accountability is needed. This requires enhancing the role of communities and district assemblies in planning, design and implementation procedures.<sup>42</sup> Involvement of communities could be achieved through farmers or water user associations and coordinated by the district assembly though lack of capacity and corrupt behaviours at the local level remain significant stumbling blocks. Given the imbalances in power that characterise most rural areas of northern Ghana, alliances between local government (district assemblies) and civil society organisations (such as the Ghana Integrity Initiative and the Ghana Anti-Corruption Coalition)<sup>43</sup> have a role to play. Though they have not yielded any results but an official investigation, recent pressure politics are a step in the direction of better transparency and downward accountability and illustrate the political workings of the Ghanaian democracy. However, the complex linkages between decentralisation and corruption need to be further investigated as decentralisation not only provides for further checks and balances but may also open the way to capture (Stålgren, 2006; Zinnbauer and Dobson, 2008).

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<sup>42</sup> Adding output-based and sustainability clauses requiring planners and implementers to submit a post-implementation monitoring protocol to be cooperatively implemented could be a way forward. The construction company is currently officially responsible of the dam up to six months to one year after completion. If any deterioration occurs during that period, the entrepreneur is due to fix it on its own account. It remains unclear how frequently this clause of the contract is respected.

<sup>43</sup> Ghana is a country with a vibrant civil society and a multitude of active NGOs. We mention here two platforms that specifically address corruption issues and have embarked in research, round table discussions, public forums and debate to sensitise the public on anti-corruption issues though, to the best of our knowledge, they have not been active in the agricultural water sector to date.

Table 1. Deficient relationship from policy making to management of small reservoirs.

	Exchange relationship within the public (state) realm	Exchange relationship between public and private actors	Exchange relationships between public/private actors and communities
Policy making and regulation	<ul style="list-style-type: none"> <li>• Cover-up of fraudulent practices</li> <li>• Inadequacy between donors and government priorities</li> <li>• Project 'focal points' and two-speed bureaucracy</li> </ul>	<ul style="list-style-type: none"> <li>• Fraudulent certification of contractors</li> <li>• Fraudulent bank security certificate</li> </ul>	<ul style="list-style-type: none"> <li>• Access to information is difficult (lack of transparency)</li> <li>• No Right of Information Act (has been submitted to parliament)</li> </ul>
Planning and budgeting	<ul style="list-style-type: none"> <li>• Overestimation of project costs by donors and/or government</li> <li>• Pressure to invest in high capital investment projects</li> <li>• Pressure by politicians related to site selection</li> </ul>	<i>No evidence available</i>	<ul style="list-style-type: none"> <li>• Influence for site selection through district assemblies and members of parliament</li> </ul>
Financing	<ul style="list-style-type: none"> <li>• Pressure to disburse funds</li> <li>• Lack of traceability and accountability on funds channelled through 'budget support'</li> </ul>	<ul style="list-style-type: none"> <li>• Bribery to decrease transaction costs (speed money; complex procedures)</li> </ul>	<ul style="list-style-type: none"> <li>• No involvement of communities due to absence of downward accountability</li> </ul>
Management and programme design	<ul style="list-style-type: none"> <li>• Challenging interactions between multiple level of decision making (line agencies, decentralised government)</li> <li>• 'Big-bang' approach</li> <li>• Under-resourced line agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure to invest in high capital-investment projects</li> <li>• Lack of accountability of contractors vis-à-vis local authorities (either line agencies or local government)</li> </ul>	<ul style="list-style-type: none"> <li>• Influence for site selection through district assemblies and members of parliament</li> </ul>
Tendering and procurement	<ul style="list-style-type: none"> <li>• Cover-up of fraudulent practices related to procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Award of contracts based on political allegiance and kickback to political parties/government officials</li> <li>• Fraudulent documentation (bank certificate, material ownership, etc)</li> <li>• Fraudulent design (to increase costs)</li> <li>• 'Informal' hiring of public officials</li> <li>• Bribery to decrease transaction costs (speed money; complex procedures)</li> </ul>	<ul style="list-style-type: none"> <li>• No involvement of communities due to lack of downward accountability and low levels of empowerment</li> </ul>
Implementation (construction and supervision)	<ul style="list-style-type: none"> <li>• Kickback to political parties (local politicians)</li> <li>• Cover-up fraudulent practices</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate supervision and kickbacks</li> <li>• Under-resourced line agencies, dependent on the contractors for conducting their work</li> <li>• Sub-contracting</li> <li>• Failure to complete works</li> <li>• Concealing substandard works</li> <li>• Overbilling</li> <li>• Delays (work and payment)</li> <li>• Failure to comply with contract specification and clauses</li> <li>• Lack of liability and legal action</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of participation of 'end users'</li> <li>• Covering up fraudulent practices and misappropriation of material</li> <li>• Lack of downward accountability and liability</li> </ul>
Operation, maintenance and management	<i>No evidence available</i>	<i>No evidence available in this study (see Laube, 2009)</i>	<ul style="list-style-type: none"> <li>• Practices favouring access to small reservoirs by elites</li> <li>• Opportunistic behaviour (WUAs set up to acquire project benefits)</li> </ul>

Note: In the table, 'public' designates international players (donors and projects), local to national governmental agencies (bureaucracy) and governments (politicians).

Finally, transparency and information flow are weak components of the tendering, procurement and payment processes of both government and donor projects. Any changes in current provisions and practices would require working together with local governments and central authorities such as the Public Procurement Board. It is a difficult balance to find but it already appears that simplifying procedures could help in reducing opportunities for petty corruption and that strengthening right-to-information provisions is needed. Concerning the later point, the Right to Information Bill currently under examination by the Parliament of Ghana could be a step forward but the practicalities of its implementation remain to be seen.

## CONCLUSION

This paper contributes to a better understanding of the planning and implementation of small-scale water development projects in sub-Saharan Africa through a case study of small reservoir projects in Ghana. We describe the inherently unpredictable nature of development planning and specifically delve into the dynamics of corruption that add to this unpredictability. We highlight a complex suite of petty misconducts and shortcomings that are generally overlooked by planners and decision makers, but have significant impacts on project outcomes. Lapses in planning and management result indeed in delays in implementation, poor construction, escalating costs, and ultimately low performance of reservoirs thus threatening the benefits communities can derive from those interventions.

The series of corrupt practices observed hang on a complex web of formal and informal practices that characterise development planning and public action in sub-Saharan Africa and beyond. Clearly, 'corruption studies' can contribute to a better understanding of development interventions in the water sector. But, rather than an elusive and unproductive search for a culprit, priority attention should go towards highlighting multiple accounts, perceptions and legitimisation discourses that pose corruption as a suite of social processes involving multiple actors. In the case of Ghana, such an approach highlights the fact that corruption is grounded in and reinforces a complex tension between formal practices and a vernacular logic of action. This informalisation of the formal constitutes the 'working rule' of public action and challenges any normative answer to the problem of corruption.

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